

## APPENDIX

## Changes to Abstract:

The following is a marked-up version of the amended Abstract.

ABSTRACT OF THE DISCLOSURE

10028711.062402  
A projection optical system that projects an image on a first side onto a second plane through a plurality of lenses includes the following elements in order from the first side to the second plane: a first lens group that ~~is arranged in an optical path between the first side and the second plane and~~ has a negative refractive power, a second lens group that ~~is arranged in the optical path between the first lens group and the second plane and~~ has a positive refractive power, a third lens group that ~~is arranged in the optical path between the second lens group and the second plane and~~ has a negative refractive power, a fourth lens group that ~~is arranged in the optical path between the third lens group and the second plane and~~ has an aperture stop in the optical path, and a fifth lens group that ~~is arranged in the optical path between the fourth lens group and the second plane and~~ has a positive refractive power. ~~An~~ A clear aperture of a lens surface or an outer diameter of a lens of ~~the plurality of lenses in the~~ projection optical system ~~as~~ has a relative maximum in the second lens group, a relative minimum in the third lens group, and a relative maximum in the third-fifth lens groups, and has only ~~once~~ one significant minimum between the first side and the second plane. ~~At least one of the plurality of lenses is held such that at least one of a position and an orientation of the lens is adjustable, and a numerical aperture of the second plane of the projection optical system is equal to or more than 0.8.~~

Examination in due course is earnestly solicited.

Respectfully submitted,



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MAC/ccs

Attachments:

Replacement Abstract  
Appendix

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